

RAW SEQUENCE LISTING

DATE: 09/10/2001

PATENT APPLICATION: US/09/783,320

TIME: 11:21:51

Input Set : A:\LEX-0137-USA SEQLIST.txt

Output Set: N:\CRF3\09102001\I783320.raw

ENTERED

```

4 <110> APPLICANT: Walke, D. Wade
5     Hu, Yi
6     Nepomnichy, Boris
7     Turner, C. Alexander Jr
8     Zambrowicz, Brian
11 <120> TITLE OF INVENTION: Novel Human Kinases and Polynucleotides Encoding the Same
13 <130> FILE REFERENCE: LEX-0137-USA
C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/783,320
C--> 15 <141> CURRENT FILING DATE: 2001-02-15
15 <150> PRIOR APPLICATION NUMBER: US 60/183,582
16 <151> PRIOR FILING DATE: 2000-02-18
18 <150> PRIOR APPLICATION NUMBER: US 60/184,014
19 <151> PRIOR FILING DATE: 2000-02-22
21 <160> NUMBER OF SEQ ID NOS: 50
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 3108
27 <212> TYPE: DNA
28 <213> ORGANISM: homo sapiens
30 <400> SEQUENCE: 1
31 atgaaaaacc tggtagtgaa gataatatct ggatcttttc cacctgtgtc tttgcattat      60
32 tcctatgatc tccgcagttt ggtgtctcag ttatttataa gaaatcctag ggatagacca      120
33 tcagtcaact ccatattgga gaaagggttt atagccaaac gcattgaaa gtttctctct      180
34 cctcagctta ttgcagaaga attttgtcta aaaacatttt cgaagtgttg atcacagcct      240
35 ataccagcta aaagaccagc ttcaggacaa aactcgattt ctgttatgcc tgctcagaaa      300
36 attacaaagc ctgccgctaa atatggaata ccttttagcat ataagaaata tggagataaa      360
37 aaattacacg aaaagaaacc actgcaaaaa cataaacagg cccatcaaac tccagagaag      420
38 agagtgaata ctggaagaaga aaggaggaaa atatctgagg aagcagcaag aaagagaagg      480
39 ctggaattta ttgaaaaaga aaagaaacaa aaggatcaga ttattagttt aatgaaggct      540
40 gaacaaatga aaaggcaaga aaaggaaagg ttggaagaa taaatagggc cagggaacaa      600
41 ggatggagaa atgtgctaag tgctgggtga agtgggtgaag taaaggctcc ttttctgggc      660
42 agtggaggga ctatagctcc atcatctttt tcttctcgag gacagtatga acattaccat      720
43 gccatttttg accaaatgca gcaacaaaga gcagaagata atgaagctaa atggaaaaga      780
44 gaaatatatg gtcgaggtct tccagaaaagg caaaaagggc agctagctgt agaaagagct      840
45 aaacaagtag aagagttcct gcagcgaaaa cgggaagcta tgcagaataa agctcgagcc      900
46 taagacata tgggaatcct gcaaaacctg gcagctatgt atggaggcag gccagctct      960
47 tcaagaggag ggaagccaag aaacaaagag gaagaggttt atctggcaag actgaggcaa      1020
48 ataagactac agaatttcaa tgagcgccaa cagattaaag ccaaacttcg tggtagaaaag      1080
49 aaagaagcta atcattctga aggacaagaa ggaagtgaag aggctgacat gaggcgcaaa      1140
50 aaaatcgaat cactgaaggc ccatgcaaat gcacgtgctg ctgtactaaa agaacaacta      1200
51 gaacgaaga gaaaggaggc ttatgagaga gaaaaaaaag tgtgggaaga gcatttggtg      1260
52 gctaaaggag ttaagagttc tgatgtttct ccacctttgg gacagcatga aacagggtggc      1320
53 tctccatcaa agcaacagat gagatctggt atttctgtaa cttcagcttt gaaagaagtt      1380
54 ggcgtggaca gtagttaaac tgatacccg gaaacttcag aagagatgca aaagaccaac      1440
55 aatgctatct caagtaagcg agaaatactt cgcagattaa atgaaaatct taaagctcaa      1500
56 gaagatgaaa aaggaaatgca gaatctctct gatacttttg agataaatgt tcatgaagat      1560
57 gccaaagagc atgaaaaaga aaaatcagtt tcatctgacg gcaagaagtg ggaggcagga      1620

```

RAW SEQUENCE LISTING

DATE: 09/10/2001

PATENT APPLICATION: US/09/783,320

TIME: 11:21:51

Input Set : A:\LEX-0137-USA SEQLIST.txt

Output Set: N:\CRF3\09102001\I783320.raw

```

58 ggtcaacttg tgattcctct ggatgagtta aactagata catccttctc tacaactgaa 1680
59 agacatacag tgggagaagt tattaatta ggtcctaag gatctccaag aagagcctgg 1740
60 gggaaaagtc cgacagattc tgttctaaag ataactggag aagctgaact acaacttcag 1800
61 acagaactat tagaaaaaac aactattaga agtgagattt ctcccgaagg ggaaaagtac 1860
62 aaacccttaa ttactggaga aaaaaagta caatgtattt cacatgaaat aaacccatca 1920
63 gctattgttg atttctctgt tgagacaaaa agtcccagat tcagtgaagg atctccacag 1980
64 atgtcattga aactggaagg aaatttagaa gaacctgatg atttggaac agaaattcta 2040
65 caagagccaa gtggaacaaa caaagatgag agcttgccat gcactattac tgatgtgtgg 2100
66 attagtgaag aaaaagaaac aaaggaaact cagtccggag ataggatcac cattcaggaa 2160
67 aatgaagttt ctgaagatgg agtctcgagt actgtggacc aacttagtga cattcatata 2220
68 gagcctggaa ccaatgattc tcagcactct aaatgtgatg tagataagtc tgtgcaaccg 2280
69 gaaccatttt tccataaggt ggttcattct gaacacttga acttagtccc tcaagttcaa 2340
70 tcagttcagt gttcaccaga agaatccttt gcatttcgat ctactcgc tttaccacca 2400
71 aaaaataaaa acaagaattc cttgtctgatt ggactttcaa ctggtctggt tgatgcaaac 2460
72 aacccaaaga tgttaaggac atgttcactt ccagatctct caaagctggt cagaaccctt 2520
73 atggatgttc ccaccgtagg agatgttcgt caagacaatc ttgaaataga tgaaattaaa 2580
74 gatgaaaaca ttaaagaagg accttctgat tctgaagaca ttgtgtttga agaaactgac 2640
75 acagatttac aagagctgca ggcctcgatg gaacagttac ttagggaaca acctggtgaa 2700
76 gaatacagtg aagaagaaga gtcagtcttg aagaacagtg atgtggagcc aactgcaaat 2760
77 gggacagatg tggcagatga agatgacaat cccagtagtg aaagtgcctt gaacgaagaa 2820
78 tggcactcag ataacagtga tggtgaaatt gctagtgaat gtgaatgcga tagtgtcttt 2880
79 aaccatttag aggaactgag acttcatctg gagcaggaaa tgggctttga aaaattcttt 2940
80 gaggtttatg agaaaataaa ggctattcat gaagatgaag atgaaaatat tgaaatttgt 3000
81 tcaaaaatag ttcaaaatat tttgggaaat gaacatcagc atctttatgc caagattcct 3060
82 catttagtca tggcagatgg agcctaccaa gaagataatg atgaataa 3108

```

84 <210> SEQ ID NO: 2

85 <211> LENGTH: 1035

86 <212> TYPE: PRT

87 <213> ORGANISM: homo sapiens

89 <400> SEQUENCE: 2

```

90 Met Lys Asn Leu Val Leu Lys Ile Ile Ser Gly Ser Phe Pro Pro Val
91 1 5 10 15
92 Ser Leu His Tyr Ser Tyr Asp Leu Arg Ser Leu Val Ser Gln Leu Phe
93 20 25 30
94 Lys Arg Asn Pro Arg Asp Arg Pro Ser Val Asn Ser Ile Leu Glu Lys
95 35 40 45
96 Gly Phe Ile Ala Lys Arg Ile Glu Lys Phe Leu Ser Pro Gln Leu Ile
97 50 55 60
98 Ala Glu Glu Phe Cys Leu Lys Thr Phe Ser Lys Phe Gly Ser Gln Pro
99 65 70 75 80
100 Ile Pro Ala Lys Arg Pro Ala Ser Gly Gln Asn Ser Ile Ser Val Met
101 85 90 95
102 Pro Ala Gln Lys Ile Thr Lys Pro Ala Ala Lys Tyr Gly Ile Pro Leu
103 100 105 110
104 Ala Tyr Lys Lys Tyr Gly Asp Lys Lys Leu His Glu Lys Lys Pro Leu
105 115 120 125
106 Gln Lys His Lys Gln Ala His Gln Thr Pro Glu Lys Arg Val Asn Thr
107 130 135 140
108 Gly Glu Glu Arg Arg Lys Ile Ser Glu Glu Ala Ala Arg Lys Arg Arg

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/783,320

DATE: 09/10/2001

TIME: 11:21:51

Input Set : A:\LEX-0137-USA SEQLIST.txt

Output Set: N:\CRF3\09102001\I783320.raw

```

109 145          150          155          160
110 Leu Glu Phe Ile Glu Lys Glu Lys Lys Gln Lys Asp Gln Ile Ile Ser
111          165          170          175
112 Leu Met Lys Ala Glu Gln Met Lys Arg Gln Glu Lys Glu Arg Leu Glu
113          180          185          190
114 Arg Ile Asn Arg Ala Arg Glu Gln Gly Trp Arg Asn Val Leu Ser Ala
115          195          200          205
116 Gly Gly Ser Gly Glu Val Lys Ala Pro Phe Leu Gly Ser Gly Gly Thr
117          210          215          220
118 Ile Ala Pro Ser Ser Phe Ser Ser Arg Gly Gln Tyr Glu His Tyr His
119 225          230          235          240
120 Ala Ile Phe Asp Gln Met Gln Gln Gln Arg Ala Glu Asp Asn Glu Ala
121          245          250          255
122 Lys Trp Lys Arg Glu Ile Tyr Gly Arg Gly Leu Pro Glu Arg Gln Lys
123          260          265          270
124 Gly Gln Leu Ala Val Glu Arg Ala Lys Gln Val Glu Glu Phe Leu Gln
125          275          280          285
126 Arg Lys Arg Glu Ala Met Gln Asn Lys Ala Arg Ala Glu Gly His Met
127          290          295          300
128 Gly Ile Leu Gln Asn Leu Ala Ala Met Tyr Gly Gly Arg Pro Ser Ser
129 305          310          315          320
130 Ser Arg Gly Gly Lys Pro Arg Asn Lys Glu Glu Glu Val Tyr Leu Ala
131          325          330          335
132 Arg Leu Arg Gln Ile Arg Leu Gln Asn Phe Asn Glu Arg Gln Gln Ile
133          340          345          350
134 Lys Ala Lys Leu Arg Gly Glu Lys Lys Glu Ala Asn His Ser Glu Gly
135          355          360          365
136 Gln Glu Gly Ser Glu Glu Ala Asp Met Arg Arg Lys Lys Ile Glu Ser
137          370          375          380
138 Leu Lys Ala His Ala Asn Ala Arg Ala Ala Val Leu Lys Glu Gln Leu
139 385          390          395          400
140 Glu Arg Lys Arg Lys Glu Ala Tyr Glu Arg Glu Lys Lys Val Trp Glu
141          405          410          415
142 Glu His Leu Val Ala Lys Gly Val Lys Ser Ser Asp Val Ser Pro Pro
143          420          425          430
144 Leu Gly Gln His Glu Thr Gly Gly Ser Pro Ser Lys Gln Gln Met Arg
145          435          440          445
146 Ser Val Ile Ser Val Thr Ser Ala Leu Lys Glu Val Gly Val Asp Ser
147          450          455          460
148 Ser Leu Thr Asp Thr Arg Glu Thr Ser Glu Glu Met Gln Lys Thr Asn
149 465          470          475          480
150 Asn Ala Ile Ser Ser Lys Arg Glu Ile Leu Arg Arg Leu Asn Glu Asn
151          485          490          495
152 Leu Lys Ala Gln Glu Asp Glu Lys Gly Met Gln Asn Leu Ser Asp Thr
153          500          505          510
154 Phe Glu Ile Asn Val His Glu Asp Ala Lys Glu His Glu Lys Glu Lys
155          515          520          525
156 Ser Val Ser Ser Asp Arg Lys Lys Trp Glu Ala Gly Gly Gln Leu Val
157          530          535          540

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/783,320

DATE: 09/10/2001

TIME: 11:21:51

Input Set : A:\LEX-0137-USA SEQLIST.txt

Output Set: N:\CRF3\09102001\I783320.raw

```

158 Ile Pro Leu Asp Glu Leu Thr Leu Asp Thr Ser Phe Ser Thr Thr Glu
159 545 550 555 560
160 Arg His Thr Val Gly Glu Val Ile Lys Leu Gly Pro Asn Gly Ser Pro
161 565 570 575
162 Arg Arg Ala Trp Gly Lys Ser Pro Thr Asp Ser Val Leu Lys Ile Leu
163 580 585 590
164 Gly Glu Ala Glu Leu Gln Leu Gln Thr Glu Leu Leu Glu Asn Thr Thr
165 595 600 605
166 Ile Arg Ser Glu Ile Ser Pro Glu Gly Glu Lys Tyr Lys Pro Leu Ile
167 610 615 620
168 Thr Gly Glu Lys Lys Val Gln Cys Ile Ser His Glu Ile Asn Pro Ser
169 625 630 635 640
170 Ala Ile Val Asp Ser Pro Val Glu Thr Lys Ser Pro Glu Phe Ser Glu
171 645 650 655
172 Ala Ser Pro Gln Met Ser Leu Lys Leu Glu Gly Asn Leu Glu Glu Pro
173 660 665 670
174 Asp Asp Leu Glu Thr Glu Ile Leu Gln Glu Pro Ser Gly Thr Asn Lys
175 675 680 685
176 Asp Glu Ser Leu Pro Cys Thr Ile Thr Asp Val Trp Ile Ser Glu Glu
177 690 695 700
178 Lys Glu Thr Lys Glu Thr Gln Ser Ala Asp Arg Ile Thr Ile Gln Glu
179 705 710 715 720
180 Asn Glu Val Ser Glu Asp Gly Val Ser Ser Thr Val Asp Gln Leu Ser
181 725 730 735
182 Asp Ile His Ile Glu Pro Gly Thr Asn Asp Ser Gln His Ser Lys Cys
183 740 745 750
184 Asp Val Asp Lys Ser Val Gln Pro Glu Pro Phe Phe His Lys Val Val
185 755 760 765
186 His Ser Glu His Leu Asn Leu Val Pro Gln Val Gln Ser Val Gln Cys
187 770 775 780
188 Ser Pro Glu Glu Ser Phe Ala Phe Arg Ser His Ser His Leu Pro Pro
189 785 790 795 800
190 Lys Asn Lys Asn Lys Asn Ser Leu Leu Ile Gly Leu Ser Thr Gly Leu
191 805 810 815
192 Phe Asp Ala Asn Asn Pro Lys Met Leu Arg Thr Cys Ser Leu Pro Asp
193 820 825 830
194 Leu Ser Lys Leu Phe Arg Thr Leu Met Asp Val Pro Thr Val Gly Asp
195 835 840 845
196 Val Arg Gln Asp Asn Leu Glu Ile Asp Glu Ile Lys Asp Glu Asn Ile
197 850 855 860
198 Lys Glu Gly Pro Ser Asp Ser Glu Asp Ile Val Phe Glu Glu Thr Asp
199 865 870 875 880
200 Thr Asp Leu Gln Glu Leu Gln Ala Ser Met Glu Gln Leu Leu Arg Glu
201 885 890 895
202 Gln Pro Gly Glu Glu Tyr Ser Glu Glu Glu Ser Val Leu Lys Asn
203 900 905 910
204 Ser Asp Val Glu Pro Thr Ala Asn Gly Thr Asp Val Ala Asp Glu Asp
205 915 920 925
206 Asp Asn Pro Ser Ser Glu Ser Ala Leu Asn Glu Glu Trp His Ser Asp

```

RAW SEQUENCE LISTING

DATE: 09/10/2001

PATENT APPLICATION: US/09/783,320

TIME: 11:21:51

Input Set : A:\LEX-0137-USA SEQLIST.txt

Output Set: N:\CRF3\09102001\I783320.raw

```

207      930      935      940
208 Asn Ser Asp Gly Glu Ile Ala Ser Glu Cys Glu Cys Asp Ser Val Phe
209 945      950      955      960
210 Asn His Leu Glu Glu Leu Arg Leu His Leu Glu Gln Glu Met Gly Phe
211      965      970      975
212 Glu Lys Phe Phe Glu Val Tyr Glu Lys Ile Lys Ala Ile His Glu Asp
213      980      985      990
214 Glu Asp Glu Asn Ile Glu Ile Cys Ser Lys Ile Val Gln Asn Ile Leu
215      995      1000      1005
216 Gly Asn Glu His Gln His Leu Tyr Ala Lys Ile Leu His Leu Val Met
217      1010      1015      1020
218 Ala Asp Gly Ala Tyr Gln Glu Asp Asn Asp Glu
219 1025      1030      1035
221 <210> SEQ ID NO: 3
222 <211> LENGTH: 3645
223 <212> TYPE: DNA
224 <213> ORGANISM: homo sapiens
226 <400> SEQUENCE: 3
227 atggagaagt atgtagact acagaagatt ggagaagggt catttgaaa agccattctt 60
228 gttaaatcta cagaagatgg cagacagtat gttatcaagg aaattaacat ctcaagaatg 120
229 tccagtaaag aaagagaaga atcaaggaga gaagttgcag tattggcaa catgaagcat 180
230 ccaaattattg tccagtatat agaattcattt gaagaaaatg gctctctcta catagtaatg 240
231 gattactgtg agggagggga tctgtttaag cgaataaatg ctcagaaagg cgttttgttt 300
232 caagaggatc agatttttga ctggtttgta cagatatgtt tggccctgaa acatgtacat 360
233 gatagaaaaa ttcttcatcg agacattaaa tctcagaaca tatttttaac taaagatgga 420
234 acagtacaac ttggagattt tggaattgct agagttctta atagtactgt agagctggct 480
235 cgaacttgca tagggacccc atactacttg tcacctgaaa tctgtgaaaa caaaccttac 540
236 aataataaaa gtgacatttg ggctctgggg tgtgtccttt atgagctgtg tacacttaaa 600
237 catgcttttg aagctggcag tatgaaaaac ctggtactga agataatatc tggatctttt 660
238 ccacctgtgt ctttgcatta ttccatgat ctccgcagtt tgggtgtctca gttattttaa 720
239 agaaatccta gggatagacc atcagtcaac tccatattgg agaaagggtt tatagccaaa 780
240 cgcattgaaa agtttctctc tctcagctt attgcagaag aattttgtct aaaaacattt 840
241 tcgaagtttg gatcacagcc tataccagct aaaagaccag cttcaggaca aaactcgatt 900
242 tctgttatgc ctgctcagaa aattacaaag cctgccgcta aatatggaat acctttagca 960
243 tataagaaat atggagataa aaaattacac gaaaagaaac cactgcaaaa acataaacag 1020
244 gccatcaaaa ctccagagaa gagagtgaat actggagaag aaaggaggaa aatatctgag 1080
245 gaagcagcaa gaaagagaag gctggaattt attgaaaaag aaaagaaaca aaaggatcag 1140
246 attattagtt taatgaaggc tgaacaaatg aaaaggcaag aaaaggaaa gttggaaaaga 1200
247 ataaataggg ccagggaaca aggatggaga aatgtgtctaa gtgctggtg aagtggtgaa 1260
248 gtaaaaggct cttttctggg cagtggaggg actatagctc catcatcttt ttcttctcga 1320
249 ggacagtatg aacattacca tgccattttt gaccaaatgc agcaacaaa agcagaagat 1380
250 aatgaagcta aatggaaaag agaaatatat ggtcgaggtc ttccagaaa gcaaaaaggg 1440
251 cagctagctg tagaaagagc taaacaagta gaagagttcc tgcagcgaaa acgggaagct 1500
252 atgcagaata aagctcgagc cgaaggacat atggtttatc tggcaagact gaggcaata 1560
253 agactacaga atttcaatga gcgccaacag attaaagcca aacttcgtgg tgaaaagaaa 1620
254 gaagctaata attctgaagg acaagaagg agtgaaggag ctgacatgag gcgcaaaaaa 1680
255 atcgaatcac tgaaggccca tgcaaatgca cgtgctgctg tactaaaaga acaactagaa 1740
256 cgaaagagaa aggaggctta tgagagagaa aaaaagtgt gggaagagca tttggtggct 1800
257 aaaggagtta agagttctga tgtttctcca cctttgggac agcatgaaac aggtggctct 1860

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/783,320

DATE: 09/10/2001

TIME: 11:21:52

Input Set : A:\LEX-0137-USA SEQLIST.txt

Output Set: N:\CRF3\09102001\I783320.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date